International Journal of Accounting and Economics Studies, 12 (4) (2025) 239-245

International Journal of Accounting and Economics Studies

Website: www.sciencepubco.com/index.php/IJAES
https://doi.org/10.14419/9398aj20
Research paper

Financial Inclusion and Socio-Economic Development: Analysis Through The Banking Sector in India

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Received: June 21, 2025, Accepted: August 2, 2025, Published: August 9, 2025

Abstract

Financial inclusion, a crucial aspect of economic development, aims to ensure that all members of an economy can access and effectively use appropriate financial services. This reduces poverty and enhances the country's financial well-being and economic development. The paper evaluates the impact of financial inclusion on customers' socio-economic development, offering a promising outlook for a more prosperous life. The policies on financial inclusion have garnered significant attention from scholars, policymakers, and regulators, as they have been theoretically acknowledged to affect socio-economic growth positively. The paper also provides recommendations for the governments of developing countries to enhance financial inclusion, inspiring hope for a more sustainable future.

Keywords: *Financial inclusion, Socio-economic Development, Inclusive development*

1. Introduction

Financial inclusion (FI) refers to the process of ensuring access to affordable, timely, and adequate financial services such as savings, credit, insurance, and remittance facilities to all individuals, especially the disadvantaged and low-income segments of society. According to Mishra et al. (2024) and Naili et al. (2023), financial inclusion is not only a policy tool but also a catalyst for sustainable socio-economic development. It fosters innovation in delivery channels, especially through fintech advancements and digital platforms.

Financial inclusion has a profound impact by ensuring access to financial services and timely and adequate credit for vulnerable and low-income groups at an affordable cost. It significantly boosts overall economic output, reduces poverty and income inequality (Rostagi S., 2018), and fosters gender equality and women's empowerment (Mishra D. et al., 2024). These benefits are not just theoretical but have real-world implications. For instance, access to microfinance through self-help groups (SHGs) has transformed women's lives in rural areas, shifting them from the margin to the mainstream (Maity, 2016). This is just one of the many ways financial inclusions improve the lives of individuals and communities in tangible ways.

The World Bank's consideration of FI demonstrates that it is acknowledged as a global economic development (ED) tool (Beck & Demirguc-Kunt, 2008). A significant step has been taken toward financial inclusion, and the number of adults without access to an account has steadily declined from 2.5 billion in 2011 to 1.7 billion in 2017 and 1.4 billion in 2021(Global Findex database 2021). In India, FI is not a novel concept. However, over time, the initiatives made for FI have evolved, inspiring a wave of change. The Reserve Bank of India (RBI) recently released the National Strategy for Financial Inclusion 2019-2024 on January 10, 2020. As of the fiscal year 2023, India's financial inclusion index was 60.1, according to the Reserve Bank of India. It rose from 43.4 in 2017 to its current state, indicating improved financial inclusion. The financial inclusion index measures the extent of access to and usage of formal financial services, including banking, insurance, investments, pensions, and postal sectors.

2. Literature Reviews

Mishra D. et al. (2024) underscore the multifaceted nature of financial inclusion and its socioeconomic impact on sustainable development. It is important to note that financial inclusion is not a simple concept but a complex one with a significant effect on socioeconomic development. It influences various aspects, such as poverty reduction, gender equality, social stability, and innovation in financial services. Anarfo et al. (2019) stress the importance of considering these dimensions for effective policymaking. Some studies have even developed a multidimensional index to quantify financial inclusion (Anarfo et al., 2019; Gupte et al., 2012; Park & Mercado, 2018). The most used indicators for financial inclusion include branch penetration, access, and usage (Chavriya S.,2024; Rahma A., 2022) of financial services. Other researchers (Chattopadhyay, 2011; Yorulmaz, 2013; Gupta et al., 2014) have computed financial inclusion by considering three multi-dimensional elements of an inclusive financial strategy: penetration of banks, availability of banking amenities, and use of banking

services. Similarly, Maity (2016) found that participation in financial inclusion through microfinance, mainly through self-help groups (SHGs), significantly influences women's transformation from margins to mainstream. Access to SHG loans positively impacts socio-economic changes in rural women's lives, empowering them to take control of their financial future.

Existing research focuses on the direct benefits of financial inclusion, such as enhanced economic security and poverty reduction (Demirguc-Kunt et al., 2018). Further, the literature shows that (Bhave, 2014; Bongomin et al., 2016) FI not only helps in the reduction of poverty but also supports economic development, growth, and prosperity. However, only some studies have focused on financial inclusion's impact on individuals' socio-economic growth. This paper seeks to address this gap by posing the following research question: Is the socio-economic development of customers affected by financial inclusion?

Further, many studies have used banking institutions as financial inclusion indicators (Ozili et al., 2023; Srinivasan K. et al., 2024; Maity S. et al., 2022). Various studies show that banks are India's most significant drivers of the financial inclusion process (Mishra et al., 2024; Shahid et al., 2022). As a result, this study used the banking sector as a supply-side criterion to assess financial inclusion. The present study considers three dimensions of financial inclusion: access, availability, and usage (Sarma, M., 2008). Mandira Sarma Index helps understand how well financial services reach marginalised and underserved communities, thus contributing to more inclusive development outcomes. This index has been utilised by various government agencies and the Central Bank to form reports and indices like HDI, HPI, etc. This research covers Punjab State's three largest public-sector banks (SLBC Reports), i.e., STATE BANK OF INDIA, PUNJAB NATIONAL BANK, and PUNJAB & SIND BANK. These banks serve a more significant proportion of the rural population and cover the most incredible region of Punjab through their bank branches (SLBC Reports). To collect the data, a structured questionnaire was used for this study (Salathia P., 2014). A set of questions was formed under a questionnaire to evaluate the impact of financial inclusion and the socio-economic development of customers through the banking sector. In the current study, convenience sampling was used because respondents who met the conditions of age, area, and bank account must be identified. Before analysing the actual data, the negative response score was reserved. Then, Outliers were identified and removed from the sample size, making an adequate sample size of 436 respondents.

The present study contributes to the literature on financial inclusion in several ways, including the dimension of financial inclusion, the perception of customers towards access, availability, and usage, and the direct and indirect relationships among these constructs. There have been many studies on a few of the relationships among the constructs listed above (Naili et al., I. (2023); Amidzic et al., 2014; Swamy, 2013; Beck et al., 2009; Prabhakar et al., 2017; Kandpal, V. et al., 2023), but there is a shortage of studies concentrating comprehensively on the direct and indirect relationships among the constructs in a single model and a single study. Many empirical studies (Srinivasan K. et al., 2024; Maity S. et al., 2022; Shahid et al., 2022; Shah et al., A. 2022) used multiple regression to test the relationship between the FI and socioeconomic determinants. This research used PLS-SEM to test the hypothesised relationship and understand FI's impact on customers' socio-economic development. This study helps the government and other policy-making agencies make inclusive and sustainable customer policies.

3. Research Methodology:

The Location of the study is India, and the sample of 436 customers was taken from the 15 districts of Punjab state. Before the finalisation of 15 districts, the total district of Punjab was divided into three categories: high population, low population, and medium population. Then, four districts from each category were shortlisted based on the high rural population. Furthermore, the selection of villages and branches was done through convenience sampling. Data was collected using a well-structured questionnaire survey. The financial inclusion dimension shall be assessed based on these criteria. i.e. Access to Banking Services (Srinivasan K. et al., 2024; Maity S. et al., 2022; Gupte et al., (2012), Arora (2012); Amidzic et al., (2014), Availability of Banking Services (Chakravarty & Pal, 2010; Camara & Tuesta, 2014; Kuri & Laha, 2011; Gupta et al., 2014; Nino-Zarazua & Copestake, 2008; Nandru et al., 2015), and Usage of the Banking Services (Sarma & Pais, 2008; Kumar, 2011; Gupte et al., 2012) as independent variables and socio-economic indicators as the dependent variable. Under every dimension, questions were formed to check the accessibility, availability, and usage of banking services under financial inclusion. The items in the research instrument were based on a five-point Likert scale, ranging from strongly agree (1) to strongly disagree (2) to record the score of the respondents' responses. A pilot study with 50 respondents was conducted after minor revisions to ensure the responses were accurate and functional.

As a result, this study had a sufficient sample size to conduct a statistical analysis. After that, EFA was performed by employing principal axis factoring analysis as an extraction technique with a varimax-rotation method. Further, CFA was used to check the goodness of fit statistics for measurement models along with reliability and validity tests. The PLS-SEM method has been used to explore and estimate the role of the present study's research constructs in financial inclusion (Cheah et al.; Hair et al., 2019). Hair et al. (2019) suggested that a two-step approach to data analysis has been adopted. The measurement model was assessed in the first step, and the structural model was evaluated in the second step. Another reason for using PLS-SEM is that it can handle non-normal data very well (Hair et al., 2019).

Data analysis and results

4. Data Analysis

4.1 Assessment of Reflective Measurement Model

Cronbach's Alpha was used for internal consistency reliability> .7 and composite reliability >0.7(Hair et al., 2017). The average variance extracted (AVE)> 0.5 is used to evaluate convergent validity. The reliability and validity results are reported in Table II. The analysis results indicate that all the values are far above the minimum threshold value.

To test the measurement model, this study first examined the indicator loading, then reliability and validity (Hair et al., 2017). A loading above 0.708 is recommended (Hair et al., 2018). The standardised loading values of the model are discussed in Table I.

Table 1: Summary of Outer loading

Factors	Loadings
ACS1	0.892
ACS2	0.889
ACS3	0.778
ACS4	0.755
ACE1	0.922
ACE2	0.875
ACE3	0.894
ACE4	0.88
USA1	0.854
USA2	0.87
USA3	0.735
USA4	0.75
AVLS1	0.786
AVLS2	0.887
AVLS3	0.749
AVLS4	0.741
AVLP1	0.87
AVLP2	0.838
AVLP3	0.866
AVLP4	0.747
EDI1	0.88
EDI2	0.894
EDI3	0.913
EDS1	0.913
EDS2	0.908
EDS3	0.854
EDW1	0.907
EDW2	0.932
EDW3	0.931
SDT1	0.900
SDT2	0.871
SDT3	0.820
SDT4	0.883
SDT5	0.877
SDW1	0.906
SDW2	0.770
SDW3	0.888

Table 2: Summary of reliability and validity

	Cronbach's Alpha	CR	AVE
ACS	0.851	0.899	0.69
ACE	0.915	0.94	0.798
USA	0.818	0.879	0.647
AVLS	0.818	0.871	0.629
AVLP	0.853	0.9	0.692
EDI	0.877	0.924	0.802
EDS	0.872	0.921	0.796
EDW	0.914	0.946	0.853
SDT	0.92	0.94	0.758
SDW	0.82	0.892	0.734

Source: Author's calculations

Note: Access to services (ACS), Employee Accessibility (ACE), Service Usage (USA), Services Availability (AVLS), Process Availability (AVLP), Income Growth(EDI), Growth in Saving(EDS), Growth in wealth(EDW), Self Determination(SDT), Subjective well-being (SDW).

Table 3: Summary of Discriminant Validity

	ACS	ACE	USA	AVLS	AVLP	EDI	EDS	EDW	SDT
ACE	0.35								
USA	0.349	0.43							
AVLS	0.152	0.213	0.253	.					
AVLP	0.366	0.414	0.443	0.248					
EDI	0.532	0.631	0.655	0.499	0.701				
EDS	0.457	0.634	0.528	0.404	0.646	0.812			
EDW	0.466	0.665	0.596	0.429	0.559	0.842	0.809		
SDT	0.485	0.659	0.636	0.458	0.547	0.826	0.801	0.843	
SDW	0.498	0.647	0.609	0.429	0.641	0.846	0.843	0.829	0.817

Source: Author's calculation

The heterotrait-monotrait ratio (HTMT) of the correlations (Henseler et al., 2015) method was used for discriminant validity. Further, bootstrapping can be applied to test whether the HTMT value is significantly different from 1.00 (Henseler et al., 2015) or a lower threshold value such as 0.85 or 0.90 (Franke & Sarstedt,2019). All the values in the data set are below 0.90, revealing that each construct is empirically distinct from other constructs.

Table 4: Summary of Fornell and Larcker

	ACS	ACE	USA	AVLS	AVLP	EDI	EDS	EDW	SDT	SDW
ACS	0.831									
ACE	0.329	0.893								
USA	0.311	0.385	0.804							
AVLS	0.17	0.253	0.255	0.793						
AVLP	0.331	0.383	0.395	0.251	0.832					
EDI	0.471	0.567	0.567	0.478	0.62	0.896				
EDS	0.416	0.576	0.468	0.396	0.572	0.716	0.892			
EDW	0.429	0.609	0.528	0.431	0.508	0.756	0.728	0.924		
SDT	0.448	0.608	0.565	0.458	0.502	0.743	0.723	0.775	0.871	
SDW	0.44	0.576	0.522	0.409	0.561	0.73	0.72	0.728	0.72	0.857

Source: Authors ' Calculations

Fornell and Larcker (1981) proposed the traditional metric, which suggests that each construct's AVE should be compared to the squared inter-construct correlation (as a measure of shared variance). All model constructs should not be larger than their AVEs (Hair et al., 2018). The FL Criteria table reports the square root of AVE on the diagonal and constructs correlations on the lower triangle, indicating that values are not larger than their AVE (Table IV). All the values are within the range of acceptable results.

4.2 Assessment of the structural model

After verifying the measurement model, the next step was to analyse the structural model to verify the hypothesised relationship (Hair et al., 2017). To evaluate the results of the structural model, this study evaluated the significance of the path coefficient, the R-squared, and the predictive relevance. The results of the structural model assessment are presented in Table V. The structural relationship between latent constructs represented by single-headed straight arrows is specified according to the hypotheses established. In summary, the present structural model includes

The constructions used in this study include Access to Services (ACS), Employee Accessibility (ACE), Usage of Services (USA), Availability of Services (AVLS), and Process Availability (AVLP), each representing dimensions of financial inclusion.

a) Path from ACS to EDI, EDS, EDW, SDT, and SDW
b) Path from ASE to EDI, EDS, EDW, SDT, and SDW
c) Path from ASE to EDI, EDS, EDW, SDT, and SDW
d) Path from USA to EDI, EDS, EDW, SDT, and SDW
e) Path from AVLS & AVLP to EDI, EDS, EDW, SDT, and SDW

Table 5: Summary of Structural Model

			beta	T Stat.	p-value	Remarks
ACS	->	EDI	0.174	4.928	0.000	Supported
ACS	->	EDS	0.138	3.505	0.000	Supported
ACS	->	EDW	0.148	3.732	0.000	Supported
ACS	->	SDT	0.164	4.262	0.000	Supported
ACS	->	SDW	0.158	4.1	0.000	Supported
ACE	->	EDI	0.235	6.28	0.000	Supported
ACE	->	EDS	0.315	7.646	0.000	Supported
ACE	->	EDW	0.351	8.564	0.000	Supported
ACE	->	SDT	0.332	8.556	0.000	Supported
ACE	->	SDW	0.295	7.014	0.000	Supported
USA	->	EDI	0.233	6.378	0.000	Supported
USA	->	EDS	0.136	3.051	0.000	Supported
USA	->	EDW	0.22	5.167	0.000	Supported
USA	->	SDT	0.263	6.532	0.000	Supported
USA	->	SDW	0.206	5.125	0.000	Supported
AVLS	->	EDI	0.25	7.765	0.000	Supported
AVLS	->	EDS	0.181	4.59	0.000	Supported
AVLS	->	EDW	0.215	5.672	0.000	Supported
AVLS	->	SDT	0.24	6.719	0.000	Supported
AVLS	->	SDW	0.188	4.992	0.000	Supported
AVLP	->	EDI	0.317	8.638	0.000	Supported
AVLP	->	EDS	0.307	7.004	0.000	Supported
AVLP	->	EDW	0.184	4.652	0.000	Supported
AVLP	->	SDT	0.157	3.927	0.000	Supported
AVLP	->	SDW	0.267	6.373	0.000	Supported

Source: Authors ' Calculations

The constructions used in this study include Access to Services (ACS), Employee Accessibility (ACE), Usage of Services (USA), Availability of Services (AVLS), and Process Availability (AVLP), each representing dimensions of financial inclusion.

The proposed model strived to identify the impact of financial inclusion on socio-economic development. There is a significant relationship between ACS and EDI(B = 0.174, t = 4.928, P < 0.00), EDS (B = 0.138, t = 3.505, P < 0.00), EDW (B = 0.148, t = 3.732, P < 0.00), SDT (B = 0.164, t = 4.262, P < 0.00), SDW(B = 0.158, t = 4.1, P < 0.00). Moreover, the relationship between ACE and EDI (B = 0.235, t = 6.28, P < 0.00), EDS (B = 0.315, t = 7.646, P < 0.00), EDW (B = 0.351, t = 8.564, P < 0.00), SDT (B = 0.332, t = 8.556, P < 0.00), SDW(B = 0.295, t = 7.014, P < 0.00) is significant.

Table 6: coefficient of determination (R2)

	EDI	EDS	EDW	SDT	SDW
Rsq	0.663511	0.549564	0.58006	0.612144	0.574432
AdjRsq	0.659589	0.544314	0.575166	0.607624	0.569472

Besides, the effect of USA and EDI (B = 0.233, t = 6.378, P < 0.00), EDS (B = 0.136, t = 3.051, P < 0.00), EDW (B = 0.22, t = 5.167, P < 0.00), SDT (B = 0.263, t = 6.532, P < 0.00), SDW(B = 0.206, t = 5.125, P < 0.00) is also significant. Further, AVLS and EDI (B = 0.25, t = 7.765, P < 0.00), EDS (B = 0.181, t = 4.59, P < 0.00), EDW (B = 0.215, t = 5.672, P < 0.00), SDT (B = 0.24, t = 6.719, P < 0.00), SDW(B = 0.0.188, t = 4.992, P < 0.00) is significant effect. Last, AVLP and EDI (B = 0.317, t = 8.638, P < 0.00), EDS (B = 0.307, t = 7.004, P < 0.00), EDW (B = 0.184, t = 4.652, P < 0.00), SDT (B = 0.157, t = 3.927, P < 0.00), SDW(B = 0.267, t = 6.373, P < 0.00) is also significant.

Next, to assess the quality of the structural model, the coefficient of determination (R2) and effect size (F2) were reported. The coefficient represents the combined effect of the exogenous latent variables on the endogenous latent variable (Ringle et al., 2014). The R2 ranges from 0 to 1, indicating a greater explanatory power; 0.75 is considered substantial, 0.50 moderate, and 0.25 weak (Henseler et al.,2009; Hair et al., 2011). In the current analysis, the R2 values were calculated using the Smart-PLS algorithm, as shown in Table VI.

The (R2) value from EDI, EDS, EDW, SDT, and SDW lies between 0 and 1, indicating higher predictive accuracy and explanatory power (Hair et al., 2011). EDI explains 66.35 per cent of FI dimensions, EDS is 54.95 per cent, and EDW is 58.00 per cent. Finally, explaining 61.21 per cent SDT and 57.44 per cent SDW, which are considered explanatory potential in the model, is indicated. Further, the adjusted coefficient of determination (R2adj) can be used as the criterion to avoid bias towards complex models. The adjusted R2 for EDI, EDS, EDW, SDT, and SDW, as the significant dependent variable within the model, was 0.66,0.54,0.58,.61, and 0.57, suggesting that the independent variable (access, availability, and usage) can explain above 50 % of EDI, EDS, EDW, SDT, and SDW. These results imply that the effect of FI dimensions is significant.

Table 7: Summary of F2 effect size

	EDI	EDS	EDW	SDT	SDW
ACS	0.073	0.036	0.043	0.057	0.051
ACE	0.124	0.166	0.219	0.213	0.154
USA	0.121	0.032	0.087	0.133	0.075
AVLS	0.166	0.061	0.099	0.13	0.07
AVLP	0.221	0.151	0.06	0.047	0.123

Source: Authors Calculation's

F2 indicates the effect size and is somewhat redundant to the size of the path coefficients. This measures the change in the R2 value when a specified exogenous construction is omitted from the model and can be used to evaluate whether the omitted construct has a substantive impact on the endogenous constructions. As a rule of thumb, values higher than 0.02, 0.15, and 0.35 depict small, medium, and large F2 effect sizes (Cohen,1988; Hair et al.,2018). Effect size values of less than 0.02 indicate no effect (Hair et al., 2011).

The constructions used in this study include Access to Services (ACS), Employee Accessibility (ACE), Usage of Services (USA), Availability of Services (AVLS), and Process Availability (AVLP), each representing dimensions of financial inclusion. The summary of Table VII indicates that access to services (ACS) has a negligible effect on EDI, EDS, EDW, SDT, and SDW, with all values higher than 0.02 but lower than 0.15, indicating important indicators for FI. Besides, this employee accessibility (ACE) has a medium effect on EDI, EDS, EDW, SDT, and SDW. Both the factors of access (ACS & ACE) indicate that they directly impact the socio-economic development of the customers. Further, service usage (USA) has a medium effect size on dependent variables, i.e., EDI, EDS, EDW, SDT, and SDW. Then, the variable of availability dimension, i.e., AVLS, has medium AVLP and has a large effect, and the most significant indicators for FI are shown in Table VII.

5. Research Discussion

Various studies have been conducted on the topic of FI. Individually, the relationships between financial literacy and poverty with FI have been empirically tested by Bhanot et al. (2012), Camara and Tuesta (2015), Nandru et al. (2015), Gogia and Agrawal (2016), Sharma (2015), Kumar (2015), Dupas and Robinson (2013), and Heenkenda (2014). However, collectively, in a structural model where access, availability, and usage are causing FI, their relationships with the socio-economic development of customers have yet to be observed much by the authors in the literature. The Primary objective of this study was to "Analyze the socio-economic development of the customers through financial inclusion through the banking sector". This was achieved using a hybrid PLS-SEM-based approach. The study investigated the direct effect of financial inclusion on the socio-economic development of customers and found support for all the objectives.

The results suggest that financial inclusion dimensions significantly positively affect customer development. The results also revealed that access, usage, and availability play a vital role in the goal of financial inclusion, which further leads to inclusive and sustainable growth of the country. A significant association between the financial inclusion dimension and its relationships with the socio-economic development of customers has also been found in prior studies (Naili M. et al., 2023; Mishra, D.,2024), and results of the current study are consistent with those studies. The study results also confirmed the relationship between financial inclusion indicators, which indicates that development in both developments, i.e. socio-economic. Previous studies have validated this relationship (Rastogi, S., 2018; Ofoeda et al., J. Y., 2024; Ozili, P.K., Ademiju, A., and Rachid, 2023). The results of the current study demonstrate that access, usage, and availability are predictors of financial inclusion. Overall, using a structural model, this study reveals that access, availability, and usage are causing FI and directly impacting customers' socio-economic development.

6. Conclusion

This study confirms that the key dimensions of financial inclusion—access, availability, and usage—positively influence customers' socio-economic development. By employing the PLS-SEM methodology, the research offers strong empirical evidence linking financial services to outcomes such as income growth, savings, wealth accumulation, and well-being. The findings contribute to theoretical and practical discussions on inclusive growth models and support design policies that harness FI as a development strategy.

1. Based on the structural and measurement model of PLS-SEM, this study proposed that financial inclusion dimensions directly affect the socio-economic development of the customers. This supports all the data and results in the study. The findings contribute to the body of knowledge on financial inclusion by demonstrating how financial inclusion affects customer development. Furthermore, the role of the FI dimension in leading to inclusive and sustainable goals should not be underestimated, as this study emphasises. The present study has limitations that need further investigation.

2. For instance, the study focused only on the banking sector and ignored other financial institutions' contributions to financial inclusion improvement, such as postal departments, self-help groups, etc. Second, the study is confined to the geographical region of Punjab, and customer behaviour may vary in different locations. One strongly recommended future direction for research is the user perceptions and adoption of fintech and financial inclusion, women's financial inclusion. On the other hand, the study results have practical implications that practitioners and policy-making agencies have used this data for policy formation.

7. Policy Implications

While the study supports expanding banking infrastructure and financial education, policymakers must consider practical challenges. For example, the costs associated with establishing ATMs and branches in remote areas, digital illiteracy among older populations, and gaps in internet penetration may hinder policy execution. Additionally, there is a growing need to align financial inclusion with Environmental, Social, and Governance (ESG) goals by promoting green finance, inclusive digital products, and ethical lending practices. According to the results of the research model, the government in India needs to promote the level of financial inclusion, especially in improving ease of access through the number of bank branches and ATMs, and domestic credit provided. Firstly, the government should expand the bank branches and ATMs to rural areas to allow people to access financial services without spending too much time and money. Financial education strategies should also be provided to every age group. For example, the government may apply the Japanese approach to education by inviting retired people in the finance and banking sector to come to schools and villages to teach people about basic knowledge of financial products and services. By doing this, people will have the best source of formal financial knowledge, significantly improving national financial literacy.

Secondly, the government can create opportunities for start-ups in e-commerce by promoting online transactions instead of cash. Vietnam's heavy dependency on cash for transactions makes point-of-sale (POS) devices less popular. On the other hand, many stores have not installed POS devices, opting instead for the traditional payment method of cash, causing inconvenience for customers who prefer card transactions.

Thirdly, the developing countries' governments should also consider establishing centralised management of ATMs outside the branches of commercial banks and an organising entity in the form of a joint stock company responsible for governing and monitoring these ATMs. This company would manage the ATMs regarding ownership, development strategies, exploitation, operation, maintenance, and upgrades. This centralised management model aims to optimise operating processes and the funding process. This study confirms that the key dimensions of financial inclusion—access, availability, and usage—positively influence customers' socio-economic development. By employing the PLS-SEM methodology, the research offers strong empirical evidence linking financial services to outcomes such as income growth, savings, wealth accumulation, and well-being. The findings contribute to theoretical and practical discussions on inclusive growth models and support design policies that harness FI as a development strategy.

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